Amendment to the Claims:

This listing of claims will replace all versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method, comprising:

receiving a power signal from a power input;

receiving a data signal from a data input;

receiving an Ethernet primary communication signal;

sending the Ethernet primary communication signal to a network device on a first medium;

sending a discovery signal to the network device on a second medium;

receiving a discovery response from the network device via the second medium that is responsive to the discovery signal; and

providing a power signal modulated with a data signal to the network device on the second medium after receiving the discovery response signal.

2. (Original) The method as set forth in claim 1 further comprising the step of modulating the data signal in a manner interoperable with the power signal.

3. (Previously Presented) The method as set forth in claim 1 further comprising the step of receiving an Ethernet secondary data signal.

4. (Original) The method as set forth in claim 3 further comprising the step of multiplexing the data signal and the second data signal for transmission on the shared medium.

5. (Previously Presented) The method as set forth in claim 3 further comprising the step of concurrently transferring the Ethernet secondary data signal with the power signal, and data signal on the shared medium.

6. (Previously Presented) The method as set forth in claim 1 further comprising the steps of:

receiving an Ethernet secondary data signal;

converting the Ethernet secondary data signal into a bit-stream second data signal; and

concurrently transferring the second data signal on the second medium with the power signal, and the data signal.

7. (Original) The method as set forth in claim 6 further comprising the step of multiplexing the data signal and the second data signal for transmission on the shared medium.

Claims 8 - 9 (Canceled)

10. (Currently Amended) An apparatus comprising:

a power input for receiving a power signal;

a primary communication input for receiving an Ethernet primary communication signal;

a data input for admitting a data signal;

a modem for modulating the data signal with the power signal;[[;]]

a discovery signal generator coupled to the modem;

a ~~discover~~ discovery signal detector coupled to the modem;

wherein the Ethernet primary communication signal is provided to a network device on a first medium;

wherein the data signal and the power signal are provided to the network device on a second medium;

wherein the discovery signal generator is configured to send a discovery signal to the network device through the modem on the second medium;

wherein the discovery signal detector is configured to detect a discovery response signal responsive to the discovery signal via the modem; and

wherein the ~~discover~~ discovery signal detector is responsive to detecting a discovery response signal to have the power signal provided to the network device on the second medium.

11. (Previously Presented) The apparatus set forth in claim 10 wherein the modem employs a frequency shift keying scheme.

12. (Original) The apparatus set forth in claim 10 wherein the data is serial control data.

13. (Canceled)

14. (Previously Presented) The apparatus set forth in claim 15 further comprising a micro terminal server to convert the Ethernet secondary data signal to a bit stream.

15. (Previously Presented) The apparatus as set forth in claim 10 further comprising:

a second communication input for receiving an Ethernet secondary data signal into the apparatus;

a multiplexer to combine the data signal and secondary data signal for transmission on the second medium; and

wherein the modem modulates the secondary data signal with the data signal and the power signal; and

wherein the data signal, secondary data signal, and the power signal are concurrently transmitted on the second medium.

16. (Canceled)

17. (Original) The apparatus of claim 10 wherein the power signal is sourced from a DC power source.

18. (Original) The apparatus of claim 10 wherein the data input comprises an RJ-45 jack, wherein the RJ-45 jack connects the data input to a network.

19. (Original) The apparatus of claim 18 wherein the RJ-45 jack further includes any necessary transformers for impedance matching, isolation, and noise rejection.

20. (Original) The apparatus set forth in claim 10 further including sensing circuits which detect whether the network device connected to the network port requires power.

21. (Original) The apparatus of claim 20 wherein the sensing circuits require power and wherein the sensing circuits couple power and data signals and transmit them to the network device on the shared medium.

22. (Original) The apparatus of claim 20 wherein the sensing circuits detect that the network device does not require power and wherein the sensing circuits allow for passive transmission of data signals only.

Claims 23 - 33 (Canceled)

34. (Currently Amended) An apparatus, comprising:

a power input for receiving a power signal;

a primary communication input for receiving an Ethernet primary communication signal;

a data input for admitting a data signal;

a second primary communication input for receiving an Ethernet secondary communication signal;

a first output coupled on a shared medium to the network device;

a second output coupled on a shared medium to the network device;

means for multiplexing the data signal and the Ethernet secondary communication signal;

means for modulating the multiplexed data signal and Ethernet secondary communication signal with the power signal;

a discovery signal generator;

a discovery signal detector;

wherein the Ethernet primary communication signal is provided to the network device on the first output; and

wherein the means for modulating provides the power signal, data signal and Ethernet secondary communication signal on the second output;

wherein the ~~discover~~ discovery signal generator is responsive to send a discovery signal to the network device through the means for modulating on the second output; and

wherein the discovery signal detector is configured to receive a discovery response signal that is responsive to the discovery signal via the means for modulating; and

wherein the means for modulating is responsive to provide the power signal to the network device after receiving the ~~discover~~ discovery response signal.

35. (Canceled)